A SURVEILLANCE PROGRAM ON AIR POLLUTION EFFECTS: THE ITALIAN EPIAIR PROJECT

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Background and Aims: Air pollution levels are critical in many urban areas in Italy. The objective of this presentation is to describe the methodology and the main results of the Italian "Air pollution and Health:Epidemiological Surveillance and Primary Prevention – EpiAir- project".
Methods: The EpiAir project, funded by the Centre for Disease Control and Prevention of the ItalianMinistry of Health, was designed to provide methods and criteria for epidemiological surveillance of the health effects of air pollution in large Italian cities. A network of public institutions in the field of environmental control and public health participated in the project. The main elements of the project are: -Evaluation of the short-term health effects (mortality, hospital admissions) of air pollution in large Italian cities, using a standardized methodology (case-crossover approach). –Evaluation of factors (socio-demographic characteristics, co-morbidities) that can confer a higher susceptibility to the effects of air pollution. -Collection of information on the mobility policies recently implemented by local administrations.
Results: The first phase of the project (2001-2005) involved ten Italian cities (Turin, Milan, Mestre, Bologna, Florence, Pisa, Rome, Taranto, Palermo,Cagliari); statistically significant effects of all pollutants (PM10, NO2, Ozone) were observed for natural and cardio-respiratory mortality. Exposure to PM10 and NO2 was found strongly associated with hospital admissions for selected respiratory and cardiac diseases. Several pre-existing chronic conditions appear to confer a higher susceptibility to the adverse effects of NO2. The second phase of the project (2006-2010) is on going; it follows the same methodology while involving a larger number of cities (including also Ancona,Bari,Genoa,and Trieste); in this second phase we will also analyse PM2.5 data, as well as data on admissions to Emergency Departments for selected disorders.
Conclusions: A long-term surveillance program has been implemented in order to evaluate the effects of potential future preventive programs.